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PRACTICAL DISSERTATIONS

ON

NERVOUS COMPLAINTS

AND OTHER

DISEASES INCIDENT TO THE HUMAN BODY;

WITH AN

HISTORICAL INVESTIGATION

OF THEIR

CAUSES AND CURE

In which are interspersed

SOME SINGULAR CASES.

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“ THE WORLD. ST. EVREMOND.

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PRACICAL DISSERTATIONS

ON THE COMPLAINTS

INCIDENT TO THE HUMAN BODY

IN THE MEDICAL UNIVERSITY

OF URBINO AND CERRI

BY GIOVANNI BATTISTA

SONO, M.D. OF CERRI

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INTRODUCTION.

THE kind and beneficent Author of our nature has implanted in every human individual a principal of reason ; whereby he might discover the laws of nature, as far as they concern his conduct of life : and as diseases are one of the greatest evils he can guard against, so is it the business of the physician to discover truly and certainly, on what causes they are grounded, what matter they consist of, the principal organs in which they are
A lodged,

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lodged, and how they may safely be eradicated, without the least detriment to the body: and whatever has hitherto been accounted the essential definition of a physician, I will venture to speak it in one word; that he is best deserving of that character, that best knows how to cure diseases, and remove the obstructions that embarrass and overturn the animal œconomy.

To enable the professor of the healing art to know absolutely and properly how to cure diseases, he must labour hard to make himself master of their symptoms, causes, the principles on which they depend, the progress they make, and the alterations and changes they infer upon the constitutions of animal bodies.

This is only to be acquired by practice and experience, which are the solid foundation whence we may reasonably expect to make any advance in the true knowledge of their nature.

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nature. Every attempt to diminish the number of human afflictions, will, no doubt, be listened to with attention, and judged of with candour, and to receive so much applause as the author's labours may merit.

Such are the grounds, and such the considerations, that have encouraged me to offer to the public the following Treatise on the rational and safe method of establishing the health of those labouring under a disease the most afflicting of all others to the human mind. No heart, seeming sensible of the distress which this malady occasions, yet we sometimes see the patient's friends but little touched with their sufferings, because the distemper is seldom attended with immediate danger; but it is fully sufficient to curtail life by slow, but sure degrees. To describe every symptom of nervous complaints, would be to paint almost all others which attend the

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long train of sickness, so various are they in their appearance: yet, by having strictly examined them all during a series of years experience, and attending particularly to those symptoms which are the never-failing companions of this disorder, I flatter myself I have traced them to their primary causes, and thus settled a mode of treating them, and effectuate a perfect cure by going directly to their origin.

The ground-work of the healing art, is to understand the symptoms, causes, and phenomena of diseases, the principles on which they depend, the progress they make, and the alterations and changes they infer upon the constitutions of animal bodies; and as all the alterations, changes, and phenomena, have their dependance entirely on the changes that happen in the external, obvious, sensible qualities of heat, cold, dry, and moisture, commonly

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monly called the temperatures of the habit; and as all these are dependent on the motions of the solids and fluids, and alterable from the different degrees of impulse, hence it follows, that a number of diseases must necessarily arise from the system of the solids and fluids intended, or remitted above or beneath the balance of nature. But when it so falls out, that these external, obvious, sensible qualities retreat inwardly upon the habit, yet even here (to the practical man) the pulse will discover that retreat. For it is impossible that these qualities of heat, cold, &c. can retreat, but that the motions will accompany them; or that the motions can retreat, unless there be obstructions formed inwardly upon the habit; or that obstructions can be formed upon any of the internal organs, but that the beating of the heart must be enforced, or that the beating of the heart can be enforced,

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without the variation of the pulse; because the beating of the pulse has an immediate dependance on the artery that goes to the heart; so that even here, in such a case, which seems most remote from an intuitive knowledge, the pulse will be our guide, and inform us of the retreat, as well as the degrees of motion that attend it. Thus it most evidently appears, that we have the surest grounds to go upon, even in this perplexing case, where the external habit changes its temperature. Hence, a true knowledge of these appearances in the human frame are of the same consequence to the physician that the sea chart or compass is to the mariner; for as the latter informs the sailor of the course he is to steer, so the former directs the physician to the clearest indications, not only to discover the most obtruse causes, but also to administer
a cure

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a cure in the most stubborn and perplexing diseases.

To apply all this reasoning to the subject of my subsequent observations: That these external, sensible qualities, do not only discover to us the different degrees of motions, but the difference of constitution is a certain fact. And though few constitutions are so happy as to be able to plead an entire exemption from complaints of the nerves, or their attendants (for it is well known that spleen, even vapours, and the gloomy hypochondriac melancholy, may justly be attributed to diseases of the nerves). Seeing all of us have, more or less, a tincture of it in our first make and original constitution; yet some persons are much more naturally inclined to it than others. People of a constitution highly phlegmatic, when they come to be harrassed with the misfortunes of life, or happen to
meet

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meet with any sudden turn in their affairs, are most commonly subject to the nervous melancholy: and this more especially happens, if they are naturally inclinable to black, gloomy, and dismal apprehensions; their thoughts full of pensive, abject ideas; for those despairing intercourses with self, sadden the mind, damp the passions, and consequently depress the motions of the finest nerves, on whose powers the action of the noblest faculties have their dependance: and if we descend to examine the state of the blood, we shall discover it naturally thick, heavy and very unfit for the secretions of the animal œconomy.

On the contrary, bilious constitutions are sometimes observed to suffer under the same disease, from a very different origin, for being brisk, vegetè, and airy in disposition, their passions naturally strong, fierce, and greatly inclined to the objects they contemplate; from
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the quicker impulses they strike upon the seat of the common sensorium, it must necessarily follow, that their minds will be unable to bear any sudden shock that crosses upon their affairs, without very great emotions: and in all cases, where the passions are strongly rebated, that is, meet with a counter buff, in the eager pursuit after objects, there the motion of the fibres, upon their recoil, must sink beneath their natural standard, upon which the mind itself will sink or sadden, or at least appear to do so, according to the perception of the patient; and we often observe, that persons the most chearful, gay, and vivacious in conversation, when alone, are not without their frequent intervals of sad and gloomy moments.

To conclude: as the well or ill exercise of the faculties depends entirely on the well or ill exercise of the organs, serving these facul-

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ties; so it naturally follows, that wherever these organs are disconcerted in their motions, the exercise of those faculties will suffer a change, which will be attended with different symptoms, according to the different constitution of the patient. And this is the reason of those different symptoms, that often arise, under the same disease in different habits, and why some people of a hot bilious constitution, when they start sometimes from their reason, in consequence of nervous affections, are raging, furious, and distracted to the last degree; while others of a colder temperament are incident to deep cogitations, languid thoughts, and to revolve long upon the most dejecting ideas, which, if not remedied, often terminates in natural gloomy melancholy, and closes the scene.

P R A C-

PRACTICAL DISSERTATIONS

O N

NERVOUS COMPLAINTS.

S E C T. I.

*Of the Structure, Mechanism, and Modulation
of the Nerves, necessary to produce Sensation
in Animal Bodies.*

I THINK it appears evidently clear from reasoning and argument, that the intellectual faculties receive their powers of action from the laws of matter and motion, while the soul resides in the human machine. I will, therefore, go on to discover, as well as I am able, how all our sensations are commu-

nicated to the understanding, by the mediation of bodily organs; that is, how the materials of all our knowledge are transmitted to our thoughts, by means of the nerves, and the mechanism of these curious instruments necessary to produce these sensations.

That infinitely better part of us, the soul, would be but little, or not at all, concerned for the sufferings of the body, were it not liable to be affected with all those pleasures or pains that tended to its health or sickness; but it could not be affected with those sensations of pleasure and pain, were it not for those fine threads the nerves, that every where strike the mind with the idea of sensation upon the application of any object.

Every fibre of the body is perceived to be affected with the sense of feeling, but we cannot conceive how this feeling faculty can ever be lodged in the fibre, that is, the nervous system, as a bundle of fine chords curiously interwove, can perceive nothing apart from the mind; if you divide a nerve, the part it is disposed to will immediately lose all sensation, unless some other branch furnish it with a slip; however, it will be deprived of all sen-

sation it derived from the former nerve. It is plain then, that the body feels not, but the soul, and that it has pleased the Divine Author of Nature to communicate to certain fibres, so and so modulated, a power or capacity of transmitting the ideas of all objects, that enter by any of the senses to the understanding.

This capacity of the fibres, in the transmission of objects, we call sensation; and these sensations are furnished to the mind, from a certain modulation of fine, white, pellucid chords, we call nerves.

In dissections, upon viewing these fine chords that are the instruments of sense, motion, and strength, in animal bodies, we perceive that they derive their origin from the brain, cerebellum, and medulla spinalis, though the great father of physic, *Aristotle*, believed them to be originated from the heart, and thus falsely taught his followers. Such was the ignorance of the structure of the human body in those days.

There are ten pair that arise within the skull, whose fibres are displayed upon the several organs of the four senses, viz. vision, hearing,

tasting, and smelling. The rest are thirty pair in number, which arise from the medulla spinalis, that, in their descent down the spine, come out from between the vertebræ of the neck, back, and loins. These vertebral nerves give to every point of the body, where they come, a most sensible idea of touch, which would be inexpressibly affecting, were not their sensations somewhat abated by a fine carnous covering.

Now, these different modulations of the nerves, by which different sensations are produced in the body, depend on certain motions of their *machinulæ* *, that affect each other in every contact of the object; by which contact the sensation is propagated to the seat of the common sensorium; for all sensation is only the different impression of objects applied to the nerves differently disposed to receive their appulse.

The mind sits as an arbiter or judge, capable of being affected with divers objects from without; the admission of objects from without, is by means of the nerves serving

* *Machinulæ* are little small corpuscles of matter, that vary their distance and motion, in every contraction or distension of a fibre, muscle, or organ.

any of the senses, which immediately convey the ideas to the understanding, by means of the common sensorium *.

The Divine Author has wisely ordered the brain and its fibres to be naturally relaxed, that they might not be susceptible of those inexpressibly acute sensations, to which they had been liable to be affected with, from the immediate presence of the mind, had they been more contracted, or screwed up to an equal degree of tensility with the nerves themselves; for then, every the slightest passion of the mind, or affection of the body, must have endangered the animal machine with convulsions; from those extremely acute sensations, the impulse would have struck upon the fibres of the brain in every contact of the object;

* This common sensorium I take to be that point of the brain, where the ideas of all objects terminate, immediately before they affect the mind; that is, where all objects make their last impressions, immediately before the soul receives them from corporeal organs: so that the common sensorium, according to my apprehension of this intricate subject, seems the ending of matter and the beginning of thought; or that I may express myself in terms as little ambiguous as possible, that point of the brain, where all the nerves serving sensation, receive their origin.

but, more especially, from the impression of those objects that raise the most sensible passions.

While the nerves of the animal machine continue justly modulated, or braced according to the regular standard of nature, the mind will perceive itself perfectly at ease, and free from all manner of pain and uneasiness. But it may be asked, how shall we know when this animal machine is exactly braced and modulated, agreeable to the exact standard of Nature's laws? And what are the mechanical powers on which that modulation depends? To which I would answer, that the mind perceiving itself perfectly at ease, will be the clearest indication, that the several undulating fibres are acceding nearest to the balance of nature; for it is impossible that any organ of the reasoning instrument can be out of tune, but that the mind will perceive it; so that, upon these grounds, we have a standard to go by, or a director to inform us, whenever this system of matter and motion is any way affected; and, not only so, but this thinking being is capable of pointing out the very part it perceives primarily affected, which still gives

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us the greater assurance, that a disease subsists in the body.

Indeed the Divine Author has so surprizingly contrived the harmony of the human fabrick, that the mind and body shall equally suffer under all the different circumstances of life; so that, if the bodily organs be faint, weary, or any ways disconcerted in their springs, the mind perceives their affection, and is affected with the change. The question therefore is, whether the remedies made use of for the recovery of these disorders acts upon the body or mind? And from all observations I have been able to make, they most certainly act upon the bodily organs; for, by raising the contraction of the arteries, we, at the same time, increase the circulation of the blood, raise the beating of the pulse, the motion of the heart, and quicken the circulation of the animal fluids, whereby all the senses are revived, the faculties dilated, and the soul itself cheered, by those fine, soft, undulating motions, that the fibres, thus assisted, strike upon the passions.

On the 20th of September, 1786, a gentleman, about thirty years of age, applied to
me

me for advice, labouring under the following symptoms of nervous melancholy: his voice weak, scarcely able to articulate his words, frequent tremors, frightful apprehensions, sudden starts, especially in the night whilst in bed, a weak, creeping pulse, and every now and then palpitations at his heart. In company he was dull to a degree, though by nature of the most lively turn of mind, as appeared afterwards, when he recovered his pristine health. About two years previous to his applying to me he had lost his wife, which he took so much to heart, as was supposed to be the cause of all these maladies.

I was happy to be the means of re-establishing the health of this gentleman, by a course of nervous medicines; in the space of three months he was made completely happy. When his bodily organs had acquired their natural tone, his mind resumed its wonted cheerfulness and gaiety: But he was so well pleased with his surprizing change, as well as his numerous friends who had given him up for lost, that nothing would serve him but to continue the same remedies near a year, though there was little occasion for it.

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In order to produce sensation in the organs of animal bodies, it is not only necessary that the several parts be endued with nervous fibres, braced or strung to a certain degree of tenfity; but that these nerves be capable of a peculiar modulation, on which the harmony of contact may depend. Nature has furnished those fine fibres, ordained for the office of sensation, with numberless small, papillary machinulæ, that, in every sensation, from the application of any object, should vibrate on each other, and by that means convey the idea to the seat of the common sensorium. But if an object is applied to any organ when its fibres are too much relaxed (like the case of the above gentleman), which they are capable of from divers causes, it often follows, that the body becomes deprived of its functions, the health of the patient declines, stupors, numbness, affect the several members of the frame in a very singular manner.

Hence, on the other hand, if these wonderful little chords, called nerves, happen, from any causes, to be too much contracted, that is, drawn up nearer to each other, than is consistent with a regular standard, the sensation

tion of that part, or organ, will be increased, and the idea of pain communicated to the seat of the common sensorium; pain arises from too great tension put upon the fibres of any organ, and this tension causes a contraction of the machinulæ that forms the fibre; these contractions excite the idea of pain; but if these contractions be greatly increased above the standard of nature, they then produce convulsions, or convulsive motions, which, in some cases, wholly destroy the ideas of both pain and sensation, as generally happen in the epilepsy, and more violent convulsions of the brain; and, indeed, in all cases wherever the nerves are either too much contracted, or relaxed, there the natural sensations will be either too much increased or diminished.

If any of the nerves happen to be either too much contracted or relaxed, that is, if the balance of equality, or that proper point of distance, whereby they excite their powers with perfection, happen from any causes to be disconcerted, then the functions of the body will be slowly performed; and if this be natural to the state of the body, such are called dull, heavy, and stupid persons; when all the
dulness

dulness is in the incapacity of the organs, and by no means imputable to a defect of the mind.

If we examine into the natural endowments and capacities of mankind, there is most certainly a surprizing difference; from whence, I pray then, does it arise, but from the natural structure, mechanism, and modulation of the nerves, that compose the several instruments of sensation, whereby the perception of objects that come in by any of the senses, are more or less clear? This perception of objects, when it is natural, may very properly be called, the genius, or disposition with which the person is naturally endowed; he is, therefore, more aptly disposed to learn, which disposition arises from his senses, being more open to the impressions of objects; that is, from the instruments of any particular sense, being finely strung to a just medium.

If we descend to consider the circumstances of the blood, necessary to produce that ingenuity, promptness of expression, or facility of wit, which some men are so remarkable for above others, we perceive it to arise from the arteries and nerves naturally tense, from
blood

blood and spirits easily moveable: hence the juices, and especially the animal fluids, will be more readily disposed to secrete, and consequently the ideas of objects struck on any of the senses with a stronger impulse.

I shall beg leave here to take notice of the different degrees of sensation incident to affect infants and very old people; and why both these states of life are least susceptible of the impressions of objects. Infants, or very young children, are not capable of retaining the ideas that affect any of their senses; because those finest fibres of the brain, on which the sensations depend, are yet unfolded; nor do they open before they have made some considerable progress in years, and consequently the ideas that come to the mind, through any of the senses are soon erased upon the disappearing of the object: hence the reason why children are scarce able to recall any thing to mind, before they are advanced into the third or fourth year. Old men, whose nerves, in regard to tone and modulation, have continued regular in proportion to their years, we find retain their ideas long, because their memories being good, and what still adds greater force,

force, they become very tenacious of what they have got by experience. Hence we discover the reason, why very old men will discourse in a very agreeable manner, upon former transactions, even after all the avenues of the external senses are contracted and shrivelled up by age, and the diseases incident to affect them in the latter periods of life. This power depends on the wonderful strength of their nerves destined to excite the perception of thought, and decaying not so readily as those nerves serving the instruments of the external senses, retain their mechanical powers often a long while after all the external avenues to the mind are entirely obliterated and done away.

Here it may not be amiss to take notice of the three great nervous mental powers belonging to the human machine, viz. sensation, perception, and reflection. Though it must be very clear to any person who considers the signification these words are made to stand for, that they convey very distinct ideas, yet they are almost immediately depending on each other. Reflection is only a power of the mind, by which it revives any former perceptions. Perception is a power, by which the
mind

mind perceives any sensation lodged in any particular organ of the body; so that sensation precedes perception, almost in the same manner, that perception does reflection, only the former is more instantaneous. Hence the reason, it is said, there can be no perception, where there is no sensation; neither can there be any reflection, where there is no perception. These three powers of the mind, as I have before observed, are depending on each other, and all on the due modulation of the nerves.

On the 28th of April, 1785, I was consulted in the case of a young gentleman twenty-six years of age, whose nerves were debilitated in such manner, as to deprive him of perception and sensation; the latter chiefly affected the parts of generation, causing a perfect impotency. He had a total loss of memory, and even his hearing was particularly affected.

Though naturally of a florid complexion, he was now become pale and fallow, being ill near three years. By a course of nervous remedies his health was happily re-established, acquiring

acquiring the functions of both his mind and body in the most perfect manner.

Perception may properly be called a power in the mind, to apprehend the sensation lodged by the contact of bodies in any of the sensible organs, whether it be in the hearing, seeing, tasting, feeling, or smelling sense. Sensation, therefore, is in the part affected, perception in the mind, perceiving the affection.

When we consider the uses and ends for which nature has destined the nerves, and their liquors; the various evils and fatal consequences that often attend their diseases, need not occasion surprize or wonder: for it is evident, that these are the same to the animal spirits, that the stomach is to the chyle, or the arteries to the blood; and as the first dissolves the meats, and changes them into a fine chyle, so arteries change the new-received chyle into blood. Hence it is evident, that when either of these organs gets out of order, the human machine will be materially affected, and will inevitably decline and languish, unless relief is procured. It will readily be admitted, that the cause of many diseases of the nerves arises from a deficiency of fine animal

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spirits

spirits undulating through them. Hence the abatement of fundry functions in the body, and the necessity to recover their natural elasticity, in order to revive their faculties. I have often observed a natural defect, or impotency, in very young people, arising from diseases of the nerves distributed to the parts of generation, which prevented the parties from entering into wedlock, till such time as they had regained their strength and elasticity. This often arises also from sprains and weakness, which sometimes attend an immoderate pursuit of pleasures, arising from the nerves being elevated to a surprizing degree above their natural standard; from a too great expansion and dilitation in the motion of the animal fluids following on those degrees of elevation, and from the noblest faculties, being surprizingly agitated in the different conflicts of the spirits. But I must confess, I have seen double the number of the former cases, than those arising from the latter causes.

S E C T.

S E C T. II.

Of the Reality of Nervous Diseases, with their Train of Symptoms, and the dangerous Consequences that attend their Neglect.

IT would be in vain to endeavour to discover the disposition of body most liable to be affected with nervous melancholy. It would also be in vain to attempt to support the causes of that disposition, upon the different temperaments of the solids, and the causes of that different temperature on the different springiness of the fibres, that communicate a different impulse, motion, and secretion to the blood and juices. If, after all these arguments and reasonings upon this subject, nervous melancholy, and the consequences arising therefrom, should be accounted (according to the opinion of some unthinking people) as an imaginary disease, and that has no other support than a wrong turn of the fancy. But from the experience I have had in these diseases, together with the strict attention I have paid

to the variety of symptoms attending them, it is very easy for me to discover the difference of constitutions, that so greatly diversify the same disease in different bodies, I shall therefore endeavour to remove those vulgar prejudices and mistakes concerning the nature of those affections, by demonstrating the regular progress of the symptoms, and their fatal tendency, when not prevented by timely applications.

The world, indeed, has, for a long time, been at a loss what to make of nervous diseases; the epithet of spleen, vapours, and hypochondriack melancholy, is in general annexed to them; nor have they been less puzzled to discover, under what class of diseases they might most properly range them. Hence the reason, why some gentlemen, when they cannot reasonably account for those surprizing phœnomena that often arise in nervous diseases, are so ready to resolve all into whim, or a wrong turn of the fancy. But if that variety of symptoms that often affect the body, under those disorders, arise from a wrong turn of the fancy, I could wish that such gentleman would be so candid as to inform us, from whence

whence that wrong turn of the fancy itself arises, that is supposed to give being to all those symptoms: for I deny, that the thoughts themselves can ever start from a regular way of thinking, without inferring, at the same time, a change in the motions of the animal fibres; whether the object causing that irregular turn of thought, was primarily struck upon the mind, and so acted upon the body, by first acting upon the passions; or was first lodged in the fibres, and by affecting the material organs, after that disconcerted the passions; and after them the mind: I say, which way soever the shock was received, it is impossible that the mind can suffer, and the body be unaffected at the same time; and *vice versa*. For it may be perceived in those violent passions, or transports of anger, that are big enough to raise a temporary mania, if, at the same time, they do not disconcert the animal organs; upon the abatement of these motions, the mind will naturally subside, settle, and recover its former state of tranquillity again, which is far otherwise when the organs, that support the passions, are affected; for then the mania, or discomposure, holds on, and

the patient often continues under its influence whole nights and days, without the least intermission.

The criterion, therefore, by which we judge when all the motions of the animal fibres are regular; that is, when the body is in a state of perfect health, is discoverable from the natural power of our perception, which depends on the due tone of the nerves, on the natural course of the humours, on the natural secretions of the juices, and on the natural contractions of the solids; for it is impossible that any particular secretion can be vitiated, but that there will be pain and uneasiness, or that there can be pain and uneasiness in any organ, but that the mind will perceive it. This perception arises from the necessary connection, consent, and agreement, that all those fine springs and fibres, that compose the animal machine, hath with the mind and its faculties.

Hence, every change of the mind necessarily indicates a change in the bodily organs; for it is impossible for the wit of man to conceive how the mind can, from a cheerful, gay disposition, fall into a sad and disconsolate state, without some alterations in the nerves at the
same

same time; for the relative gravity of the body, that is, what we call lowness of the spirits, is no otherwise increased upon these changes, but as the body weighs heavier to the mind; nor is it possible that the mind could perceive any addition of weight, if the fluids did not move slower in the vessels, upon which their attracting principle is increased to a degree greater than is consistent with a free circulation, and consequently a regular standard of health.

From the foregoing arguments it clearly appears, that whenever the mind perceives itself uneasy, low-spirited, or dejected, it is as full a demonstration, as the nature of the thing will admit, that the instruments, by which the mind directs the powers of its operations, are affected; and this holds good, more especially if the under faculties produce not their regular effects, agreeable to the determination of the will.

Here an objection may be started to the foregoing arguments. Some, perhaps, may say, that it is a common thing to hear men declare, that they cannot go, walk, nor stir, from the place where they are fixed, although

they have the perfect use of their limbs, and apparently in good health in every respect. But the languid sensations with which I have seen very young men afflicted, in consequence of a debility of the nerves, is the cause of this general indolence of body. Force, it is true, has obliged such to walk, and attempt at a little exercise; but where is their comfort? It is true, a dead man may be removed from place to place, or to what place you please, but no man, labouring under a nervous *malady*, can make use of his bodily powers with satisfaction, till such time as his nerves are invigorated by a course of generous medicines.

On the 4th of April, 1787, a gentleman, about thirty years of age, came to town from Norfolk for my advice in a case of this nature, which had afflicted him near five years; he was tired out with consultations and taking medicines, and had resigned himself to fate.

His symptoms were as follows:—He enjoyed sound sleep all night, but when he woke in the morning, he found himself more fatigued than when he went to bed; his languor was such, as often to render him unable to rise without

without help; he had inclination to sleep more, but, if he indulged himself, he felt still more languid than before.

His appetite was very precarious, coming and going by fits; if you presently got ready what he then inclined to eat, it in general was good; but if not, it vanished. He often perceived a faintness to seize his spirits, which was succeeded with motes flying in the air, backward and forward, before his eyes; sometimes as if clouds and mists were floating in the atmosphere, which interrupted his sight. He was sometimes seized with a dizziness of the head; his bowels, through indigestion, were very much troubled with wind. He was often subject to a hissing noise in the ears, very troublesome to hear, and which interrupted his hearing: this I imagined proceeded from cold already taken, which, falling upon the organ of the ear, so relaxed the drum and auditory nerve, that the least diversity of weather generally affects it with disagreeable sounds, unless a proper remedy is applied. He often felt a disagreeable sensation of cold down his back-bone, and a pain frequently seized the small of his back. His mind was
dull,

dull, heavy, and uneasy, though the original state of his spirits were gay, merry, and cheerful. His complexion was wan and pale, his eyes appeared rather dull, not unlike those affected with the first beginning of a consumption.

In the space of three months this gentleman's nerves were so invigorated by a course of *nervous medicines*, that both his body and mind had happily acquired their natural powers in the most perfect manner, and he now enjoys all the blessings of health and happiness.

It is in vain, therefore, under such circumstances as these, to expect obedience of the bodily powers to our demands; we might as well bid a blind man see, or a deaf man hear, as bid a patient, labouring under these diseases, to be brisk, to walk, and be lively, till we have, with a course of generous medicines, removed the pressure that chains him down, and is the occasion, very often, of a most dark and gloomy way of thinking. A man perceives himself sad, dejected, or low-spirited, after having taken a generous nervous medicine his drooping spirits are raised, he feels himself alert, merry, and cheerful.

From whence this change, I pray? Does the medicine immediately work upon the mind, in order to produce this alteration? No, certainly; but by first enforcing the motion of the nerves that serve the several senses, it enables the mind to see the several objects that present themselves to its view with greater clearness; so true it is, that the disposition of the mind follows the direction of the nerves, and is elevated or depressed, in proportion as the nervous system is intended or remitted in its motions, above or beneath the standard of nature. Upon these grounds, then, it clearly appears, that neither the fancy nor imagination, nor even reason itself, the highest faculty of the understanding, can feign a perception, or a disease, that has no foundation in nature; cannot conceive the idea of an indisposition that has no existence in the body; cannot feel pain or uneasiness in any part, unless there be pain or uneasiness in that part: the affected nerves of that part must strike the imagination with the sense of pain, before the mind conceive the idea of pain in that part: hence it must be in vain to go about to persuade any man, that he is perfectly at ease, while

while he, at the same time, perceives himself in both pain and anguish, from divers affections of his body.

These perceptions are certain evidences of what the soul really suffers from the affections of the body; and so long as it retains any ideas, it certainly knows, that all its perceptions, how irregular soever in the objects that excite them, are real impressions made on the mind from the organs of the body; so that, to them it is, that we owe the most evident demonstrations of our beings, and of the existence of all other things in the world. But here, perhaps, some may start this objection, that if our perceptions be such certain indications of the existence of a real affection in the body, how comes the patient so often mistaken in judging of the danger attending those perceptions in these diseases?

To this I answer, that it arises from his confounding the perception of pain, or uneasiness, with the perception of danger, arising from that pain or uneasiness; and because he perceives himself in great pain, therefore concludes himself in great danger. But the perception of pain is an idea quite different from
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the perception of danger. The former always arises from real causes, and is a certain perception in the mind, depending on the internal symptoms of the bodily organs: but the knowledge of danger is to be calculated from the circumstances of the parts affected, that depend on a chain of consequences, out of the reach of the patient to comprehend: so that in all cases of nervous diseases we ought to distinguish between the perceptions, and the knowledge that accompany those perceptions. The perceptions are always real apprehensions, from an intuitive view that the mind has of the degrees of pain and uneasiness, that, at any time, affect it, through an irregular impression of the corporeal organs; he, therefore, may certainly perceive his pains and uneasinesses to be what they are, without perceiving the danger that attends those impressions, and which has nothing to do with those degrees of perception. Hence it follows, that every perception of pain is a certain indication that the body is affected; but every consequence drawn from the degrees of that perception is not a certain indication of danger, but must be judged of by the practitioner

itioner of the healing art, from the visible circumstances of the parts affected, and from the phænomena well known to the man of experience, incident to affect the several parts under this disease.

Every one, therefore, will claim a right to be judge of his own pains, and his own uneasinesses, though he cannot of the danger that accompany those impressions. And as no man can transfer the pains and uneasinesses he labours under to another, so is it impossible that any person can make another sensible, and consequently judge of the pains and uneasinesses he labours under.

The pains and uneasinesses are, therefore, to every one what they conceive them to be ; and we must calculate their several degrees from the complaints of the patient, the symptoms he labours under, the nature of the disease ; and not from any imaginary whims and notions of our own brains, and conclude the patient feels no pains, because we perceive none in ourselves.

I have known gentlemen, when they perceived a disease untractable, and not yielding to the power of their medicines, very ready

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to charge it upon vapours or hypochondriac; or, according to their acceptation of these words, whim and fancy: but was the case of a late celebrated general officer, only whim and vapours, when he was rallied out of a real disease by a *physician* of considerable fame, who assured him, that he laboured under no disease, and that he would be perfectly free by next day from the trifling sensations he complained of? The doctor was unfortunately disappointed; the consequence was, that he expired before that period; so that, if he was well, according to this gentleman's prognostication, it was in the other world: a change that very few of us are willing to make, so long as we can conveniently reside in this.

I shall here beg leave to argue this point a little more closely, in order to remove those vulgar prejudices that too much prevail in the world. Patients, who labour under nervous complaints, and their train of symptoms, often perceive a faintness to seize their spirits, which is sometimes succeeded with motes flying in the air, backward and forward, before
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their eyes ; other times, as if clouds and mists were floating in the atmosphere.

Now, that these objects are not there as the patient perceives them, I grant, and the patient himself is very well apprized of the same ; but then how comes his organs of sight to misrepresent objects, or bring objects into view, that have no real foundation in nature ? I do not mean, does he imagine he sees what is not, but is the cause of that imaginary vision a mere creature of the fancy, or does it arise from the impairment of the optick instruments ? From the latter most undoubtedly.

These motes are nothing less than corpuscles of the fluids attracting each other ; which, as they pass before the retina, darken the atmosphere in certain points, which points appear to the patient as if they were real motes. The cause of these phenomena arises from the chrystaline humour being too grossly secreted, which demands the immediate application of some proper remedy that may divide, attenuate, and resolve the obstructions of those fibres that secrete this humour. Then again, what is it that creates that noise in the ears, that hissing sound, that frequently affect people

ple labouring under nervous maladies ; is this also mere whim ? The patient hears this ringing noise, it disturbs his rest, and awakens him from his slumbers, which certainly is more than nothing. Hence I am not at all surprized at the frequent complaints we hear of so many people losing their sight and hearing, when gentlemen are so ready to resolve the defects of these noble organs, the nerves, into whim and fancy ; by which means their disorders are suffered to gain ground, and the patient is often irrecoverably lost.

But, to go further in this serious business : are the pains that often affect the patient's limbs, that affect his back and sides, all imaginary whims ? And, to come closer to the matter, are those indigestions, those severe, racking, cholick pains, those purulent discharges from the bowels, to undergo the same fate ? If this be the way of resolving diseases, whose causes we may not, perhaps, be very well apprized of, I am afraid, in time, we shall come to account the most dangerous diseases imaginary ; and then, if the patient should fall a sacrifice through our ignorance, who may he thank for his fate ?

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From the foregoing arguments and reasonings on this subject, it clearly appears, that to be in health, and perceive it, is the same thing; and that it is impossible that any man can be in health and not perceive it, and that there is a necessary inseparable connection between the existence of health, and the perception of that existence: from which, whoever deviates has a demonstration as evident as the nature of the thing will admit, that his constitution is *starting* from its natural standard. Indeed I shall not deny, as I have already observed, but that the mind may be mistaken in judging of the degrees, as well as danger, of a disease; but still the cause of that wrong judgment must arise from some disaffection of the glands of the brain, the immediate instrument of regular thinking; still there must be some real disorder in the bodily organs, some real foundation for complaint; still the springs, wheels, and pullies of the constitution, must, by some means or other, be disconcerted, or else the mind can never receive the impression of a disease.

The fancy, we know by experience, is a roving faculty, and not easily confined to proper

per bounds ; but yet, while her organs are in order, can see through all those mists that sometimes, under a fit of nervous affection, bordering on spleen, cloud her actions, and would persuade us, that our bodies are afflicted, when they are not actually labouring under any disease. But these wrong turns of the fancy all arise from the irregular motions of the nerves, that make unsuitable impressions on the imagination. While the nerves, therefore, are in good plight, the ideas they convey through any of the senses will be regular, just, and clear ; upon which the understanding will judge and determine of objects, as they are, by the laws of nature, made to exist to a mind fitly disposed, with proper organs to receive their impression : but if the structure or mechanism of these organs happen to be disordered, and the springs of the machine out of tune, no wonder the mind perceives the alteration, and is affected with the change.

Nervous melancholy is a disease that often puts a blind on the faculties of mankind ; whereby persons so affected, think, speak, and act, sometimes little different from those

under a phrenzy. How often may we see the greatest philosopher suffering under the weight of this disorder, and in vain labouring with all his might to get rid of its tyranny? Some time ago, I knew a very learned and ingenious gentleman, who so far started from his reason, as to believe that his body was metamorphosed into a quadrupede. I must confess, that all the power of language both his friends and myself were masters of, could not dispossess him of this conceit; till, by the application of generous medicines, I restored the disconcerted nerves to their regular motions; and, by that means, gave him a sight of his error.

S E C T.

S E C T. III.

Of the different Species of Nervous Diseases.

WHEN I treat of the causes that diversify nervous complaints, and other maladies arising therefrom, it is necessary that I first consider how far these affections differ among themselves; after that, I shall proceed to discover the material differences between them and those diseases; that, by a parity of symptoms, they seem most nearly related to, as being the properest way to discover as much of their abstruse nature as is within the reach of human sagacity and penetration to comprehend.

In the preceding chapter I have endeavoured to prove, that the spleen, or nervous melancholy, &c. are real diseases, arising from disordered nerves, and no ways depending on the imaginary whims of fancy. Hence, if they are real diseases, they must have symptoms whereby the mind may perceive them whenever they appear; for it is impossible that the

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wit of man can conceive any idea of a disease without symptoms ; or that symptoms can support themselves in the constitution without a cause ; or that any cause can disorder the frame of the animal œconomy without being perceived by the mind ; for where there is no perception of a change in the mind, there can be no perception of a change in the animal organs, and consequently no disease in the body. But I except here to these diseases that deprive the mind of all perception of objects, as happens in the apoplexy, epilepsy, and syncope.

In most diseases there is a natural temperature, that indicates the constitution more naturally inclined to one disease than another. But nervous complaints seems almost a general exception to this general rule ; because we perceive several people affected, more or less, with their symptoms, not any ways naturally disposed to them.

The persons that are, by the order of nature, disposed to be affected with these maladies, especially that species I call nervous melancholy, are generally observed of a dark, pale, and wan complexion, whose nerves are

finely strung in the several organs they compose, which give a most exquisite sensation to the parts; and it often happens, that persons of this complexion are so sensibly affected with every the least recedence of the nerves from their natural standard. Hence it happens, that persons labouring under a fit of nervous melancholy are very apt to be alarmed, and sometimes think themselves past all hopes of recovery, when, perhaps, no immediate danger attends their case; while a consumptive patient will scarce believe the least danger, but flatters himself with hopes against a possibility of hope, and when not the least symptom of his recovery appears.

The reason of this is, that in the spleen and nervous melancholy, the nerves and fibres relax most in those parts that have the nearest commerce with our thoughts, that is, those nerves start first from their standard that immediately support the mind in its operation of thinking; and as they are the instruments of sensation, it is impossible they can suffer the least affection, without, at the same time, making the mind sensible of the change; so that, upon the sinking of the nerves, the

spirits themselves must necessarily sink, which will give a sinking or sadness to the mind. This is what we mean by those lownesses of spirits, those fears and dejections of the mind, that generally affect us with those uneasy sensations under a fit of this disease.

On the 20th of August, 1786, a gentleman, about thirty-six years of age, applied to me, who, some years before, had suffered a good deal from venereal complaints; but at this time he appeared to be perfectly free from them. In this, however, it was difficult to persuade him: his symptoms were a great debility of his genital parts, frequent hissing noise in his ears, every now and then a dizziness, with motes before his eyes; a palpitation sometimes about the heart, with a general languor of his frame. He remarked, that he often, of late, felt an unusual sensation in his urethra, which inclined him to think it might be some remains of his old complaint: but the fact turned out, that he had not the least venereal symptom about him; it proved to be a real nervous case. This was happily verified afterwards; for in the space of three months his nerves became braced up, acquiring

ing their elasticity, so that he recovered his pristine health, strength, and vigour, in the most perfect manner, by a course of generous medicines.

From the best and nicest observations I have been able to make, I cannot discover any other difference between the spleen and nervous melancholy, than that the former is the latter, improved on the constitution through a longer continuance of the disease. They are so nearly related to each other, that whatever can, with any propriety, be alledged of the one, with but little variation, may be inferred of the other. Both men and women, subject to these disorders, are liable to be affected with lowness of spirits; both are sometimes subject to generate wind, to a costive habit of body, bad recollection, or a loss of memory, a casual absence; whereby the regular state of the animal œconomy is sometimes greatly interrupted. These disorders receive their different natures from their affecting different sexes; for what the vapours are in women, nervous melancholy is in men; and if the female sex are subject to hysterick fits from the vapours, so men are subject to be affected with the epilepsy,

lepsy, or disorders of the convulsive kind, from *nervous diseases*.

It is very common to see patients, labouring under nervous diseases, have the scurvy at the same time: the celebrated Galen says, it is not possible they ever can be separate; but I have seen them separate in many instances. Nervous complaints will often take their rise from some great passion of grief, that depresses the action of the mind and relaxes the nerves; and unless the nerves, in such a case, are supported by the help of generous medicine, the nervous disease will become fixed in the constitution; and if it continues for a considerable time, will not fail to contaminate the motions of the blood and other juices.

This is the reason why the blood, in all nervous cases, is thick, heavy, and what we call melancholy blood; for upon a relaxation of the arteries the blood will remit of its motions; upon these remissions its particles will attract each other, and form larger globules than can well pass the minute arterial fibres, upon which there will be a defect in the secretions of the animal fluids, that will consequently impair the action of the nerves, which
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is the reason why, in some cases of these complaints, the impulse of the nerves is made so faintly on the seat of the common sensorium, as scarce to awaken the soul into a sensibility of its being. Hence arise that sudden lapse of the senses, those failures of the spirits, and that casual absence of reason, that often affect the patient under any great or surprizing turn of affairs.

It has frequently happened, when great care was not taken, that nervous melancholy has made a transition into the *mania*, by which word I comprehend all the several species of distraction, especially if the constitution be bilious; this is a most raging, involuntary fury, attended with all the symptoms that are fearless, bold, and daring. If the patient is phlegmatic, then a settled, fixed, moaping melancholy takes place, wherein he revolves in his mind all the despairing ideas he possibly can croud upon his thoughts: and hence we may conclude, that the different motions of this mania depends on the difference of the constitution, prior to the invasion of the disease. This is that different state of the body and mind under these different affections;
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both of which have their periods of exasperations and remissions. Patients, in such cases, are liable to be affected with the different temperatures of the seasons, or a thick, foggy atmosphere clouding the heavenly solar beams, which are well known to have a great influence over all kinds of those diseases.

S E C T.

S E C T. IV.

Of particular Symptoms, which I have often observed attendant on Nervous Diseases.

FROM the reasonings and arguments I have already advanced in support of the existence of these maladies, it next becomes the indispensable duty of the practitioner to distinguished their marks and characters, by which he may distinguish them from a healthful temperament: and also their pathognomick * signs, or inseparable characters, by which he may discover their specific nature, and distinguish them from all others that come under the same class. Without such knowledge it is but playing at blind man's buff with the unhappy sufferer.

Hence the essential attributes, or habitudes, that necessarily constitute every disease. The symptoms give us the idea of change in the constitution, the pathognomonicks indicate

* Pathognomonick is a proper and inseparable sign of such and such disease.

the inseparable symptoms that distinguish that change; by which we have certain marks both to discover the disease and specify its peculiar nature: for while the nerves, serving the several senses, and the use of the brain, that supports the common sensorium, continue their proper action, the impression of objects will be regular, and the mind perceive every thing to be what it is; therefore it follows, that whenever the mind begins to entertain ideas different from what they are in nature, or what nature is made to represent them to a well-disposed system of organs, which is a demonstration as clear as can be given, that the nerves are starting from their natural standard.

People, therefore, when they first perceive themselves seized with a nervous disease, complain of a manifest change in the constitution, a decline from a better to a worse state of health; and though before their spirits were gay, merry, and cheerful, they, at certain intervals, perceive them to flag, and the constitution of mind to be dull, heavy, and uneasy. This first scene of nervous debility is ushered with a languid feel all over the body:
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the disposition becomes indolent to do any kind of business ; and because these first symptoms are rather attended with uneasiness than pain, and give little disturbance to the patient, he passes them over with very little attention.

Under such circumstances the complexion is sometimes wan, pale, and declining from its usual vivacity ; the eyes appear dull, and the aspect faded.

If the stomach should suffer under the first beginnings of this complaint, (for I have known numbers of cases where the stomach has not been in the least affected) then the appetite is faint, which comes and goes by fits, and is very precarious. In such a case, unless you presently get ready what they have an inclination to eat, the appetite immediately vanishes ; after which they cannot endure the sight of victuals. To these symptoms succeed a lowness of spirits, accompanied with a faintness, and dizziness of the head : I have known some take to drinking of drams, or hot, fiery spirits, for relief in such cases ; but, instead of relieving these symptoms, it only hastened on the disease, and facilitated their ruin.

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It sometimes happens, through indigestion, or a slowness of the stomach to perform its office, the most disagreeable crudities arise, and being changed into wind, furnish a great part of the symptoms. If the wind finds vent by the superior orifice of the stomach, it arises in frequent rifts and belchings, and hiccoughs, that are hot, sharp, and sour, to that degree, as sometimes to set the teeth an edge; but if these fumes are unable to force a vent this way, then the wind descends into the bowels, which passing along that winding pipe, we call the intestines, excites a new scene of symptoms: hence arise all the strange murmurings in the bowels.

When the foregoing causes, by the pressure of the neighbouring parts, are forced into the fibres of the muscles, the progress of the disease is attended with the following additional symptom: the patient's limbs are weak, his legs tremble, which, upon walking, seem scarce able to support his tottering carcase; wandering pains affect his back, loins, and ancles; sometimes they run into his arms and wrists, and mimic pains, not unlike those that accompany the rheumatism: sometimes
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the patient perceives cold, chilly shiverings to run down his back-bone, in the same manner as in the beginning of an intermitting fever.

The body is very unequal in relation to its natural discharges; for sometimes it is obstinately costive, at other times the contrary.

Under these circumstances great profusions of pale, crude, and watery urine are discharged, that greatly depress the motions of the spirits, and damp the action of the animal faculties.

When the nervous debility is suffered to make this ravage in the constitution, it begins to attack the head and brain; the temples frequently are affected with sharp, acute pains; some are troubled with a beating or thumping in the inside of the skull, which, to them, seems as if a hammer was struck against an anvil; sometimes this pulsation is felt on the fore, sometimes on the hind part of the head.

Frequently, in the day-time, dark mists fall before the eyes, and the atmosphere appears crouded with motes waving backwards and forwards, and not seldom his sight is wholly interrupted; nor are the organs of vision only thus affected, but those of hearing

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often undergo the same fate, and are subject to a hissing, singing noise, very troublesome to bear.

When the disease has been of any considerable standing, a vertigo, dizziness, and faintness, are inseparable symptoms, and the sufferer, upon the slightest motion, is apt to break out in moist, cold, clammy sweats, most conspicuous about the temples and parts of the forehead: he starts in his sleep, and often awakes from his slumbers terribly affrighted with the horrors of his dreams.

All sudden surprizes greatly affect them: they suffer astonishingly under excessive grief, or excessive joy; the constitution, under these disorders, not being able to bear, through an exceeding tenderness of the nervous system, the extremes of either grief or joy, without a very great shock or emotion of the spirits.

Thus far of the symptoms that affect *nervous people*, in relation to the habit. I shall now proceed to discourse of those that arise from the variable temper of the mind; not, to speak properly, that the mind ever varies, but only appears so to do, from the variable temperature and motions of the organs.

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We often find nervous people quick of apprehension, vivacious, and of a mind finely turned to contemplate their ideas; they are often forgetful, which does not proceed so much from a natural defect of the memory, as an impairment of the fibres, on whose rectitude this faculty immediately depends: they are subject to very groundless fears, that render life not only uneasy to themselves, but greatly perplexing to all their friends about them.

Under lesser disturbances of the imagination, they are continually complaining of their unhappy state of life; oppressed and overborne with calamities and afflictions, which none but themselves knows what they feel and suffer: their tempers are not steady, sometimes they are cheerful, gay, and agreeably diverting; by and by the languid fit comes on, and they are depressed to the last degree of despair.

Thus, in this disconsolate state, are they a plague to themselves, their friends, and all that have any concern with them, till such time as their nerves have acquired their natural tone and elasticity.

Although their circumstances are in the most flourishing condition, their tables spread

with all the most delicate dainties that art and nature can provide ; yet that great *bleffing content* is abfent from their dwellings, fo that they *eat* their bread with greater carefulnefs and anxiety, than thofe that beg it from door to door. Thus far has it pleafed the Divine Providence to level the greateft lord upon a fquare with the meanef beggar.

SECT.

S E C T. V.

Of the Symptoms of Nervous Diseases incident to the Female Sex.

THE symptoms that affect women in these complaints, are so nearly related to those that disorder both the mind and body of *man*, that I should not have treated them in separate chapters, were it not that the former are incident to convulsive motions of the whole nervous system, whereby that oppressive matter, crowded on the organs of the brain, lungs, and inferior bowels, is cast off in frequent paroxysms.

I shall, therefore, in a more particular manner, confine this Dissertation to the symptoms which harass the animal springs of the fair sex under this disease. Those fits, vulgarly called hystericks, are more frequently observed to affect their habit, either from a stronger impulse of their passions, or a finer texture of their nerves; though I deny not, but that men, under a nervous malady, are

liable to be affected with symptoms of a convulsive kind.

There is a considerable scene acted, as well in the several organs of the body, as faculties of the mind, before these fits appear. The female patient first perceives herself low-spirited, is subject to a giddiness or vertigo, a lightness or swimming in the head, attended with faintness and weakness of all the senses. Upon any sudden surprize, the patient is subject to frequent shakings, tremblings, and palpitations of the heart; convulsive twitchings of the muscles, tendons, and nerves, in the face, back, and loins; a troublesome molesting noise, and rumbling in the inferior bowels, which often ends in belching eructations, and the rising of much wind from the stomach.

The appetite rises and falls strangely; sometimes the patient is ready to faint, unless she be immediately supported with sustenance; at other times, her stomach is so full, from a distension of the hypochonders*, with wind,

* Hypochonders, the right and left parts of the lower belly.

that

that she cannot eat the least morsel of victuals. But the unhappiness of these miserable mortals does not rest here; for besides a decay of their bodily organs, sad and gloomy symptoms affect their minds, and chain them down to the most dismal way of thinking.

June 17, 1787, a lady about thirty-four years of age applied to me, who had laboured under the above symptoms for two years and upwards: she had suffered much trouble previous to this in her family affairs, which, no doubt, had increased their violence.

By persevering in a regular course of generous medicines, with some few rules in her regimen, this lady happily regained her pristine health, which she continues to enjoy, having seen her a few days ago.

I have lately had some female patients, who, from a bad state of the blood, and irregularities peculiar to their sex, were debilitated and relaxed. (A remarkable instance of this occurred in the case of Mrs. L. of Wimpole-street :) She had been afflicted for years with the fluor albus, and she might, with propriety, be said to have remained barren; or,

being with child, constantly miscarried about the fourth month.

March 19, 1787, being then pregnant, and in this languishing condition, having long laboured under ill health, and was of a delicate frame and valetudinary habit of body. She had at this time also a troublesome cough, and her spittle was sometimes tinged with blood: her physician had ordered her frequent bleedings, and kept her on very low *diet*; indeed she was reduced to the last extreme weakness when she began to take the nervous medicines I recommended to her. In about three months her nerves became braced up, and had acquired their natural tone, the good effects of which were, that her strength, spirits, and appetite increased every day, and she was happily delivered, at her full time, of a strong male child.

Fear, sadness, and despair, those cruel tortures of the soul, so absolutely possess the minds of some female patients labouring under a nervous complaint, that they give themselves up a prey to the most insulting passions of anger, jealousy, suspicion, and whatever else can disturb the tranquillity of their peace.

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Their breasts are strangers to joy, hope, and gladness; these cheerful exhilarating passions seldom find admission within the compass of their disturbed minds.

Thus much relative to the symptoms preceding the invasion of the hysterick paroxysm, improperly called fits of the mother, or womb; which was the name given by the ancients, who erroneously supposed, that they arose from a bad ferment, or collection of sharp humours lodged upon those parts. But if, through negligence of the patient, the foregoing symptoms are suffered to continue, and harass the constitution, for any considerable time, they then produce a new train of symptoms widely different from the former, both in relation to their nature and causes; for the spleen, or nervous melancholy, arise, in their first beginning, from a relaxation of the fine fibres of the brain and nerves, whereby those instruments of thought and sensation are let down beneath their natural standards: hence all the symptoms are dejecting.

The hysterick paroxysm is excited in some patients through a mechanical necessity in the solids, to discharge the nervous system of those disagreeable

disagreeable corpuscles that are the immediate grounds of the foregoing symptoms: and as this mechanical necessity arises from the motions of the nerves exerted at these times to restore their contractile powers, so will it follow, that these fits, or at least the symptoms attending these fits, will be different, according to the different temperature of the body; the causes producing these symptoms, and the different passions to which the patient was subject before the invasion of the disease: hence these several circumstances will be over and above sufficient to excite the symptoms in one person, widely different from what they are in others.

I shall, therefore, first attempt to explain the nature of the hysterick symptoms, or characters that form the fits; afterwards I shall proceed to assign their causes; and, in conclusion, shall endeavour to demonstrate the grounds on which these causes are established, and the reasons that induced me rather to solve these phenomena, upon the principles of mechanical reasonings, than any others; for it is impossible to discover the causes before we get a right knowledge of the symptoms, because
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it is a collection of the symptoms, united under one common appearance, that forms the disease, and makes it what it is. The causes support the symptoms, not the symptoms the causes: these two principles being cause and effect, do always exist inseparable in nature; for wherever there is a disease, there will be a cause, and consequently symptoms; all which will appear in their proper natures; for the causes and effects of diseases, arising only from the irregular motions of the solids and fluids, can have no disguises, but are constantly what they appear to be; the causes real causes, and the effects real effects, resulting from these causes.

I have, therefore, frequently observed, that the access of the fits, upon the invasion of the paroxysm, differs very much in different constitutions: some faint away in the first onset, and are affected with a syncope, or swooning, in which the action of all the animal faculties is highly perverted and distressed: they involuntary grasp their hands, fix their teeth, and stretch out their limbs, as in convulsions, but lie still: by and by the patient gives signs of recovery, and is almost choaked with rifts of
wind

wind that they discharge in belchings. They weep, laugh, sigh, sob, and cry by turns; then, in a little, perhaps faint away, as in the beginning. The hands and legs are both strongly convulsed, though the trunk has but little motion.

These fits attack them sometimes four or five times, with very little intermission, no sooner out of one, but into another, at last they revive by degrees; and if, as they return to their senses, they fetch a deep groan, it is a certain indication that the fits are going off.

These paroxysms generally proceed from great grief, disappointments, &c. or some other huge passion that was too great for the weakly mortal to encounter; they are the worst kind of fits, as well with relation to their consequences as difficulty of cure; for they argue a defect of motion in the blood of some principal organ; and that the fits are unable to discharge the causes, or at least but partially.

These paroxysms shew the efforts which nature attempts at, to relieve herself, endeavouring to restore an equilibrium in the animal œconomy.

To digress a little from this subject, and draw a philosophic comparison. I think the same attempts may be exemplified by a most striking phenomena in the fabric of the globe and its elements, to restore an equilibrium, for indeed this tendency seems universal through nature.

Hence the matter discharged periodically from the burning mountains of the earth.

After violent internal commotions there issues from these mountains volumes of smoke and flame, burning stones, ashes, boiling water in deluges, a whole tide of melted minerals in the form of what is called lava; after these discharges the tumult subsides, and all is quiet.

Are we to suppose, that these grosser entrails were the offensive matter which the constitution of the earth was labouring to get rid of? Or was the whole paroxysm owing to a violent commotion of the elementary fire, which pervades the whole earth in common with every part of nature; and the impetus of which commotion, at last forcing a passage for itself from the body and bowels of the
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mountain, carries along with it whatever it finds in its way.

In the course of this Dissertation on the operation and importance of the nerves being in their just and regular standard, towards the production of the phænomena of health, and of disease in the animal œconomy, that periodical discharge commonly called menstruation, requires our particular attention, being a most important phænomena; for it is that on which apparently the continuation of the whole human species, as well as the health of the female part of it, in a great measure depends.

The absence of this discharge is another disease, which affects the powers of beauty and youth in a very singular manner; and carries off that bloom and freshness painted by nature, which neither Corregio, Titian, or Vandyke, with all the powers of art, could ever equal.

The stoppage of this discharge should first be removed; and the better to effectuate this, it will be necessary to say what appears to be the cause of the evacuation. There has been various doctrines for the explanation of this subject,

subject, but they are now all abandoned but one, which I think equally fallacious with the rest, and is as follows :

That the fluids in the human body, circulating in tubes, are under the influence of the sun and moon, because the ocean is obedient to these powers, is something very extraordinary ; when we see seas, like the Caspian, Mediterranean, and all rivers, paying no obedience to the powers of their attraction. Thus it appears to me, that an analogy is made here where none can exist ; and which, from the enquiries which I have made of women in hospitals, has not the least proof from experiment ; the catamenia, or menses, appearing at all times of the moon, the beginning, quarters, and full. Methinks the principles of vital heat, applied in this instance, together with the mechanism of the arteries and veins in this part of the human body, where the discharge is made, will assist us in explaining this phenomenon. The arteries of the womb are very large, and their areas are to the thickness of their membranes, beyond the usual proportion : on the contrary, their veins are uncommonly small, and their coats stronger in
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this part, than any other of the human body. The mechanism, and the increase of blood, which is generated in a month, or something near that time, will probably explain the whole phenomena. I am of opinion, that animal heat is always in proportion to the crassamentum, or richest part of the blood.

This crassamentum, or richest part of the blood, then increasing, in some small degree, adds a greater degree of vital heat, which distending the vessels of the whole body, these arteries, which are the weakest in their fabric and texture, will be distended most in proportion to the vital heat; and consequently those pores, which were only sufficient for letting out the serous fluid to fill the cellular coat, become large enough for the red globules and fibrous blood. By this means the increased blood mechanically discharges itself; which being once effectuated, and the vital heat diminished, the arterial coat, or tunic, becomes again sufficiently strong to restrain the blood from passing through these arterial pores.

This I am apt to think would be the same in very ardent fevers; but that the adhesion of the fibrous part of the blood being so much increased,

increased, the globules are too strongly attracted by one another to pass through these pores.

Yet, notwithstanding this phenomenon has happened in ardent fevers, particularly when the adhesion has been lessened by drawing some blood away, I am of opinion, that this way of explaining the menstrual discharge will be still more supported by the symptoms with which the female is afflicted, both preceding and succeeding this evacuation. Before it appears, the breasts are turgid, the head aches, the eyes have their lymphatics, many of them filled with blood, pain in the back, and other symptoms of a febrile state.

These sufficiently express the disposition of the blood, which accordingly appears in this discharge soon after. The due quantity being secreted, the cause of attracting a greater degree of vital heat than before is at an end, and nature is brought a little below the degree of health, as is visible in the languid look, the dispiritedness and languor of the body, which are sure signs of a diminished degree of vital fire. Upon these principles the regular discharge depends; and whatever lessens the de-
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gree of vital heat, lessens the catamenia, or menses, till they do not flow at all; and all the humours become, as it were, a vapid, inert, aqueous fluid; which scarce has attractive power sufficient to furnish the lowest degree of that with which the animal faculties can be put in motion, and the heart and arteries continued in their pulsation. The symptoms then, which attend a suppression of the menses, are all such as are consequent on a diminished degree of vital heat, and a watery, vapid, and inert state of the blood. Women, under the influence of this disease, have, in general, a great dejection in their countenance, and a melancholy mind, the pulse is feeble, unequal, and an anxiety of heart attends them.

In some irregular cases; instead of a sanguineous discharge, one of a white colour makes its monthly appearance, which, in its effects, seems to be equivalent to the other in every thing, except in what relates to the continuation of the species. Women never breed under such an irregularity.

In consequence of menstrual obstruction, the female sex becomes subject to nervous di-

feases; and their nervous system seems so remarkably affected by all that relates to this discharge, that I am often led to that quarter to look for the cause of it. The following relation is the case of a young lady I visited in the month of August, 1787, attended with the most surprizing symptoms of vapours and hyfterick fits I ever beheld in my life.

She was of a thin, pale complexion, of a tall, slender habit, and subject to a sharp, acute pain of her head, that was greatly exasperated at certain seasons.

Upon the access of the fit she fell violently on the floor, and all her body was agitated, shaken, and distorted in a most cruel manner: her head was violently convulsed divers ways, her eyes were contracted inwardly in their orbits, with their whites turned up and fixed. To these symptoms followed a light murmuring noise in the bowels, which was succeeded with a great distension of the left hypochonder, that terminated in a round globe, swelled prodigiously above the surface of her belly; presently after she smiled, and mimicked a laughing countenance; then cried, sighed, and
F 2 groaned;

groaned; after which she lay still. In about five minutes time the convulsions returned in the most furious manner; upon which, to my great surprize, she was suddenly flung off the bed with a prodigious impulse, the whole body being darted, as it were, from a spring; her abdomen gave the greatest signs of the impulsive motion: immediately after this I observed the round globe which formed the swelling on the left hypochonder vanished, though the convulsions continued; and notwithstanding there were half a dozen in the room, yet much ado had they all to lift her on the bed again, so strong was the fit above all the natural powers of her body. This was a powerful effort of nature to restore (agreeable to what I have already laid down) an equilibrium in the constitution: she had been a long time ill, and upon enquiry it appeared, that this tornado of symptoms took its source from obstructed menses of long standing; which was incontrovertably proved to be the cause afterwards; for after she had undergone a course of generous medicines, and these causes done away, she was restored to a perfect re-establishment of health, which she enjoys better

better than ever she did before, having seen her but a few days ago.

Indeed, as to the method of treating diseases in both sexes, very little need be said, when the cause of them is assigned, and the manner in which medicine operates is brought to some clearer manner of explaining, than hitherto has attended that important subject. Matter acts on matter mechanically, but not in that kind of mechanism which has hitherto been applied in many physical and medicinal enquires.

When I say that matter acts on matter, according to the laws of matter, I wish to be understood, that I mean those which hitherto have not been sufficiently explained, and which are, notwithstanding, as much mechanical as those which have been already discovered. By this, however, it is not my meaning to exclude the operation of what, with propriety, may be called spirit upon matter; such are the effects of the passions on the human frame, which it is frequently as necessary to oppose, as the infection of a putrid or any other contagious principle.

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Whatever lessens or increases the animal heat, as some passions do the one, and some the other, it is requisite to counteract their influence. This is particularly to be observed in the female sex, who are actuated by more delicate motives, and attended with greater sensibility, than are those of the male kind; at least it is in general so.

It is owing to that degree superior to the multitude, that an object which proves the greatest affliction to one, becomes scarce perceptible to another; and whilst one is insensibly wearing away and pining, from some internal cause, the other is gay and at ease in similar circumstances.

F I N I S.